

EXHIBIT 2

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION
ORACLE AMERICA, INC.,
Plaintiff,
vs. Case No. 3:10-cv-03561-WHA
GOOGLE, INC.,
Defendant.

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PURSUANT TO THE PROTECTIVE ORDER
VIDEO DEPOSITION OF JAMES R. KEARL, Ph.D.
San Francisco, California
Wednesday, March 23, 2016
Volume I

REPORTED BY:
REBECCA L. ROMANO, RPR, CSR No. 12546

Job No. CS2276036

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MR. RAGLAND: So we've been going about an hour. Why don't we take a -- take a short break.

THE DEPONENT: Okay.

THE VIDEOGRAPHER: We are off the record at 9:38 a.m.

(Recess taken.)

THE VIDEOGRAPHER: We're back on the record at 9:52 a.m.

Q. (By Mr. Ragland) So Dr. Kearl, just going back to what we were discussing about before -- discussing before the break.

If you assume, hypothetically, that Google believed -- the evidence shows that Google believed that its use of the 37 Java API -- APIs in Android was a fair use under the copyright law, would that affect your opinion that Google's recent implementation of OpenJDK implies that there were costs back in 2007 --

MS. HURST: Object to the form.

MR. COOPER: Object to the form.

Q. (By Mr. Ragland) -- of using it?

A. Let -- let me understand the hypothetical. So the question is if, in the upcoming trial, Google prevails on the fair use

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about its use of the 30s -- SSO of the 37 Java APIs, that could be a reason why it didn't do OpenJDK back in -- at that time frame?

A. Perhaps. But as I said earlier, how you characterized what Google believed, or what Oracle believed, is a factual dispute, that early -- what -- you know, there are statements on both sides. I'm -- I'm not repeating myself, and the jury will just have to decide that matter, not me.

Q. Let's turn, please, to -- back to Exhibit 1580, your report, and paragraph 49, which is on page 26.

You say in this paragraph that you neither endorse nor reject, quote, the Oracle theory that a large number of apps was important to the acceptance of a new smartphone platform such as Android.

You see that part?

A. Yes.

Q. Okay. And if the evidence at trial proves that a large number of apps did not drive acceptance of Android, how would that affect your opinion with regards to what you say in this paragraph?

A. Well, I -- I think if you go back to an

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argument, then --

Q. Well, that's -- that's actually --

A. -- there's no damages trial, so...

Q. That's right. Actually, what I'm trying to get at and -- and -- and maybe just sort of talk it over and see if we understand each other.

You've offered an opinion that the fact that Google has gone to an OpenJDK license in 2015 implies that back in the 2007 time frame, there must have been some costs associated that were not desirable to Google or it would have done it then.

That's sort of, in essence, what you're saying; is that right?

A. Not quite.

Q. Okay.

A. Dr. Leonard comes up with this very low estimate in the JDK case of \$85,000. And my observation was simply, if Google could have, at any point in the last nine years, resolved this issue by spending \$100,000, it probably would have done so. And that it didn't do so suggests that this is probably not a credible estimate.

Q. And I'm asking, might it also be possible that at least in the pre-2010 time frame, that if Google believed that there was nothing wrongful

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earlier paragraph, I say that if applications weren't important, then I would tell a jury that the APIs have low value.

Q. Essentially, zero damage -- actual damages?

A. Yeah. I mean, low value.

Q. And so is it fair to say that the evidence at trial proves that Android acceptance by consumers drove the development and availability of apps, rather than vice versa, that that implies that there are relatively low damages?

A. No, that's a different question. And this is also a factual dispute that the jury will have to resolve.

And that is, at the launch, at the outset, what were the expectations that Google had about how many apps it needed and how rapidly it needed to have them developed and so on. So it's not the ex post what happened. It's what -- presumably what Google thought it needed at launch.

Q. So I -- my understanding may be incorrect, so feel free to correct it.

But I understand that you take issue with Dr. Leonard's counterfactual analysis regarding the cost to train developers an alternative language

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1 was actually shortly after I joined CRA.

2 Q. And it's the same firm.

3 A. I think so.

4 Can I look at my colleague and see?

5 (Discussion off the stenographic record.)

6 THE DEPONENT: My colleague, who is in
7 the room, Greg Adams, and I were with LECG, and
8 then we trans- -- moved to CRA, and this is sort of
9 in that same time frame. So I, frankly, don't
10 remember whether I was LECG or CRA at the time, but
11 I was with one of those two firms.

12 Q. (By Ms. Hurst) All right.

13 Can you tell us anything about the
14 analysis that you performed in that case?

15 A. I really can't. I -- I have not looked
16 at that report for 12 years. I just don't know
17 what I did.

18 Q. Do you still possess a copy of that
19 report?

20 A. I'm sure I do.

21 Q. Do you ordinarily keep copies of your
22 deposition transcripts as well?

23 A. I do.

24 MR. RAGLAND: I'm just going to insert a
25 formal objection to this, because I don't what it's

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1 THE DEPONENT: Sure. I might quibble
2 with "all." I mean, it doesn't mean you've got to
3 be perfectly informed, but you're informed about a
4 relevant set.

5 Q. (By Ms. Hurst) What is a discrete choice
6 model?

7 A. This actually starts quite a while ago,
8 with a statistician, I think, actually in the
9 1920s, and then gets brought into economics mostly
10 by Dan McFadden, of Berkeley, who -- who got the
11 Nobel Prize, in large part, for his work in this
12 area.

13 And it's -- it's we -- we observe people
14 choosing A or B, but we may not have information
15 about how much more they liked A than B, we just
16 observe them choosing this. That's the discrete
17 choice. They make a discrete choice one way or the
18 other.

19 And then, using some assumptions and a
20 fairly sophisticated statistical approach, you can
21 back out the utility that they get from that choice
22 up to a scale variable. You don't know -- so
23 you -- you know sort -- you can look at
24 proportions, but you don't know exactly what the
25 number is.

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1 about.

2 Q. (By Ms. Hurst) And -- okay. So as you
3 sit here now, it would be your best understanding
4 that you also have a copy of your deposition
5 transcript from that case.

6 A. I think so, yes.

7 Q. You used the term earlier, "revealed
8 preference."

9 Would you explain that, please?

10 A. Sure. It has a technical meaning in
11 economics, and it is also used in kind of a casual
12 way, and I was using it in the casual way.

13 And the casual way of using it is, people
14 claim lots of things, they say lots of things. But
15 from an economist's perspective, the best evidence
16 is what they choose to do.

17 So if I have a set of options and I
18 choose A, when B was available or C was available,
19 then I have revealed that A is better for me than
20 B or C.

21 Q. And is the implicit assumption in the
22 revealed preference, as you have described it, that
23 the actor is a rational economic actor who
24 evaluates all of the choices?

25 MR. RAGLAND: Objection to form.

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1 Q. And what is the usual, if there is any,
2 measure of that utility when working with the
3 discrete choice models of consumer demand?

4 A. Often the form that they are estimated in
5 is in probability models. So you are estimating
6 the -- what is called the Logit or the Probit. You
7 are estimating the probability of particular
8 choices.

9 So -- so you have -- you have a bunch of
10 people who have made discrete choices, and you back
11 out from that a set of parameters, and then you use
12 that in -- in a choice model that says, given these
13 new options, what are the odds that I will pick
14 this one over this one.

15 Q. Now, would it be fair to say that the
16 model that Dr. Shugan created in the early phase of
17 this case was a discrete choice model?

18 MR. RAGLAND: Object to form.

19 THE DEPONENT: Yes and no. So conjoint
20 analysis and max diff analysis are survey methods
21 for gathering data about choices that people make.
22 And then you have decide, how will I analyze that
23 data.

24 And I think most conjoint use a discrete
25 choice model as the -- the underlying model for

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1 negotiation, agree to split that pool that but for
2 the patent would not be there. So you got to have
3 the patent to get there so it's apportioned
4 correctly.

5 So it's often used with profits, and --
6 and that's how I would think of using it, which is
7 the -- it's the incremental profits -- you have two
8 tasks -- well, lots of tasks, but at least two
9 tasks in -- in these constructive licenses or
10 hypothetical negotiations.

11 One is, what's the apportioned
12 contribution of intellectual property, and put it
13 more generally, to the profits of the firm using
14 it.

15 And then the second task is, how would
16 they divide those profits between them if they were
17 in a hypothetical negotiation.

18 And that's where Nash is used. I don't
19 think Nash ever envisions or never -- ever uses the
20 word "profit" as I think it's used in that
21 particular setting.

22 Q. (By Ms. Hurst) All right.

23 Now, you performed in the earlier phase
24 of this case a -- an analysis of hypothetical or
25 constructive license covering both patents and

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1 whatever they were offering in suit was for that
2 stuff.

3 Another way to think of it would be that,
4 we don't know where the future is going, but we
5 want the option of using, and you could think of
6 them -- this as then an option for those -- for
7 that intellectual property.

8 And I think the third one I had was
9 freedom to innovate. You could think of it as we
10 are going to -- we are going to develop our own
11 operating system, we are going to use Java
12 language, and we are going to run into the same
13 problems that -- that Java did, in implementing it,
14 and there's every possibility that we will trip
15 over, inadvertently, something that's been
16 patented. And so what we were licensing is the
17 right to innovate and do what we want without
18 being -- without risking a lawsuit.

19 How do I remember which side, but one of
20 you challenged that, those three paragraphs. And
21 Judge Alsup ruled out two, and the third one stood.

22 Let me make it clear for the record that
23 the subsequent paragraph after that says, more or
24 less -- I know these have been ruled out, but
25 Judge Alsup asked me to give my best economic

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1 copyrights, correct?

2 A. Correct.

3 Q. And in that case you concluded that your
4 license terms, your numbers, were the equivalent of
5 the option value for any single item of
6 intellectual property in the portfolio; is that
7 right?

8 MR. RAGLAND: Objection. Form.

9 THE DEPONENT: Yes. And I think Judge
10 Alsup excluded that paragraph, so --

11 Q. (By Ms. Hurst) Well, he excluded some
12 other things too, but --

13 A. Well, he excluded two paragraphs, but
14 that's one.

15 Q. But -- but that was your view as to what
16 was correct at the time.

17 A. I would be a bit more cautious about
18 that. What I said was -- because he had already
19 ruled on this, I said, Look, if -- if you thought
20 about what they were negotiating over for this
21 portfolio, you could think of them as being really
22 foresighted and negotiated over exactly the
23 intellectual property at in suit, the 37 APIs and
24 the -- I think it was five, and then two patents.
25 So that -- so the total value of whatever --

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1 advice, and here it is. So whatever the law says,
2 here's -- here's what an economist would say about
3 these, and that's -- that's what it was.

4 Q. And that's how you've approached the use
5 of non-infringing alternatives and disgorgement
6 analysis this time around. You've given your best
7 economic advice, you understand there may be court
8 rulings and legal frameworks that have something to
9 say about that.

10 A. Yes, yes. As I note in my report, I'm at
11 a disadvantage. I mean, when I wrote that report
12 and put those two paragraphs in, I knew there had
13 been a Daubert motion, and I knew they were going
14 to come up.

15 In this case we haven't seen Daubert
16 motions, and we haven't Daubert rulings, so, you
17 know, I'm open about that in my report. There are
18 sections of this report that, should the experts on
19 which I'm sort of commenting or using some of their
20 things, should that part be disqualified in a
21 Daubert motion, then that part of my report goes
22 out.

23 Q. And so broadly speaking, if the use of
24 non-infringing alternatives is ruled out for the
25 disgorgement analysis, are there any calculations

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royalty rate.

And the disgorgement is ex post, that is it looks at, you know, how much Google made from this. The constructive license hypothetical negotiation says, at the time before infringement occurs, when they were looking forward, how profitable do they think it would be. And there's no reason why the ex-post profit should be equal to the ex-ante expected profits.

Q. Unless their forecasts were good.

A. Yes, unless they forecast -- unless they were clairvoyant and saw exactly what the future was.

Q. And do you recall that your table 2 in your first report had a forecast of about

MR. RAGLAND: Objection. Form.

THE DEPONENT: Yeah, let's be careful about whose forecast this was.

Q. (By Ms. Hurst) Right. My apologies.

It -- it recited a Google forecast.

A. Yes. There was the -- the -- in my first report, I faced the same problem I face in this report, which is you had widely differing

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And there was one other person in the Texas A&M office who did the checking, the double-checking, and I don't know who that is. But -- but we were routinely sort of do things and have somebody else independently check -- check the calculations and so on. I don't know who that was assigned to. He would not have done any of the substantive work. He did essentially the -- what we call data management.

Q. Were any of those persons working with you a CPA?

A. I am sorry, I didn't hear.

Q. I am sorry.

Were any of those persons working with you a certified public accountant?

A. Not to my knowledge.

Q. Were any of those persons working with you a forensic accountant?

A. No. To -- to be clear, five of the six people are my former students. They are econ -- they are either econ majors or econ -- went on to get econ Ph.D.s. So these are all either BAs or Ph.D.s in economics. Dr. Adams wasn't my student, so... but the others were.

Q. You are the odd man out, Dr. Adams.

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possibilities. And in the first report, it had to do with these dramatically different forecasts. So you had numbers from the millions, or tens of millions, hundreds of millions to the billions. And one of the forecasts, the most optimistic of the forecasts was -- I don't remember the number came up, but it was -- as I recall, there was

Q. So in arriving at your 20 percent of gross ad revenue hypothetical royalty figure, in your first round report you did consider a forecast that is pretty close to how reality has turned out.

MR. RAGLAND: Objection. Form.

THE DEPONENT: Yes. But I would have to go back and look at the details, because I don't think I used that forecast to derive the 20 percent. I used some middling -- middle-ground forecast.

Q. (By Ms. Hurst) Who -- who at Charles River worked with you on this matter?

A. Dr. Greg Adams, who is sitting at the table, has a Ph.D. in economics. Dr. Steve Waters, who has a Ph.D. in economics. And then four analysts: Leslie Koyle, K-O-Y-L-E; Ryan Belliston; Gauge Love; and Carl Haden.

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Have you been able, from the record available to you, to verify in any way exactly what categories of expenses are included in any of the operating expenses used by Dr. Leonard, in his report, as expense deductions in arriving at an Android profit figure?

A. No. Let me -- let me add, if I may, I assume this would be clarified at trial. Somebody knows this and will testify to it.

If Dr. Leonard is correct, then the numbers I have are correct. If Dr. Leonard is incorrect, then on the TAC ad revenues, you can go to one of my tables and add in the -- I think it's I don't remember. But there's a number there which is the difference between the two on this particular dispute. And all you have to do is add that in.

And that would be the number that I would testify to the jury is -- is the relevant damages. And if there's some division of it, presumably somebody could say what the percentage is.

So the -- the method that I adopt, I think, is -- is -- can be applied, whatever the resolution of this dispute is.

Q. So using your methodology, but

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1 A. Sure. When you sign a contract, the
2 value the buyer has of the good is above the price,
3 and the cost that the seller has is below the
4 price.

5 After you sign the contract, but before
6 performance occurs, there could be random events
7 that change the value or the cost relative to the
8 price.

9 So if the cost goes above the price, but
10 not above the value of the buyer, the -- the seller
11 would be -- would want to breach. But the contract
12 would still move resources from lower value uses to
13 higher value uses, so that would be an inefficient
14 breach.

15 If, on the other hand, the cost for
16 whatever reason, stochastic or otherwise, went
17 above the value of the -- the buyer put on it, then
18 you would want breach. You wouldn't want to pay
19 money to produce something that was worth less than
20 it cost you to produce it.

21 Q. As an economist you would want breach.

22 A. Well, depending upon what the damage
23 remedy is. If it's expectation damages, for
24 example, the -- and assuming a big assumption that
25 you can measure them correctly, then the buyer

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1 should be indifferent between performance of the
2 contract and breach. And so even the buyer would
3 want breach because they don't really care, they
4 just get the money instead.

5 Q. Is there any way in which the use of
6 non-infringing alternative relates to the theory of
7 efficient breach?

8 MR. RAGLAND: Objection to form.

9 THE DEPONENT: I don't see the
10 connection.

11 Q. (By Ms. Hurst) Okay.

12 A. I assume you do, but I don't, so...

13 Q. That's all right.

14 Is it true that when using non- --
15 non-infringing alternatives to -- let me find my
16 page here -- to calculate value -- is value the
17 right word when you are using non-infringing
18 alternatives, or at least in the context that we
19 are in now?

20 MR. RAGLAND: Objection to form.

21 THE DEPONENT: Sure, that's fine.

22 Q. (By Ms. Hurst) When using non-infringing
23 alternatives to calculate value, is it possible
24 that, based on cost savings alone, even in the
25 absence of profit there would be disgorgement?

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1 MR. RAGLAND: Objection to form.

2 THE DEPONENT: I suppose so, yes, that is
3 if -- if -- because a -- an entity took something,
4 it was then able to reduce its losses from what
5 they would otherwise be, then I suppose -- I don't
6 know what the law is, but I suppose you could think
7 of the reduction of losses as -- as a gain to the
8 firm and, therefore, subject to disgorgement.

9 Q. (By Ms. Hurst) And is it true that if
10 you calculate value using a non-infringing
11 alternative that results in, you know, zero costs
12 to switch, as it were, then the defendant -- the
13 defendant disgorges nothing, even if they earned
14 profits in the meantime during the period of use of
15 the intellectual property.

16 MR. RAGLAND: Objection to form.

17 THE DEPONENT: Yes. But the -- but the
18 hypothetical that you just gave me, the but-for you
19 just gave me is a but-for in which what you took
20 wasn't worth anything. So the profits you got were
21 profits that weren't attributable to what you took.

22 Now, the law may have something to say
23 about what you should or should not take
24 independent, all right. But if the issue is, if I
25 took something and it just didn't matter, then,

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1 yeah, there's no profits attributable to that.

2 That's -- that's sort of Dr. Leonard's
3 code line-counting approach. I mean he -- he --
4 he, as you know, comes out with some numbers, and I
5 say in my report, this doesn't make any sense to
6 me. I mean, if one line is the same as any of the
7 other 23 million lines, there's nothing here. It
8 didn't matter.

9 So if -- if that's what you think the
10 world is like, then Android didn't get any benefit
11 from having taken the APIs.

12 May I add one thing to that?

13 Q. (By Ms. Hurst) Yeah, please.

14 A. I presume this is why statutory damages
15 are available, but I don't know, I haven't studied
16 the history of them. But presumably statutory
17 damages are available because, in some cases, you
18 may take something and not get any benefit of it,
19 but the law thinks that you shouldn't have taken
20 it; therefore, you still have to pay something.

21 MS. HURST: Why don't we take a short
22 break.

23 THE VIDEOGRAPHER: We are off the record
24 at 2:42 p.m.

25 (Recess taken.)

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unit royalty in 2008 or 2009 -- I can't remember which is year -- of .0 -- .08 cents per handset.

So I think we derive this -- I don't think it's an explicit royalty in the license, but I think we derived it by backing out what -- what the royalty had to have been, given the number of units sold and the revenues that they got.

Q. Do you -- do you know what percentage of any price erosion in Java that may -- that has occurred since 2009 is due to the iPhone as opposed to the Android?

A. No.

Q. But would you agree that at least some portion of that is likely due to the iPhone?

A. Well, I -- I wouldn't agree that -- to an opinion that it's likely. I -- I don't know whether it's likely or not. I mean, is it possible? Sure.

I suppose this goes to the issue of which is the closest substitute. Something that looks like more a phone with Java ME on it, which is Android, or Apple, which looks very different. But, sure, there could have been some effect.

MR. RAGLAND: That is all I have.

MS. HURST: Okay. I apologize. I have

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contribution of any single thing to the synergy, at least not easily. The -- and to the degree that a counterfactual -- claim to do that, then it would -- you know, then -- then it would be claiming too much.

It's -- it's a hard question because it's unclear what -- what the -- the counterfactual implies about -- about the synergy.

I don't have anything else to say from that.

MS. HURST: Let me ask one follow-up.

Q. (By Ms. Hurst) Is there anything about Dr. Leonard's use of the Kim model that attempts to account for and allocate synergies as between the input Java and the rest of the -- the Android platform?

MR. RAGLAND: Objection to form.

THE DEPONENT: No.

MS. HURST: No further questions.

MR. COOPER: Okay. For clarity, I take it the deposition is over?

MS. HURST: From my perspective, you bet.

MR. COOPER: Okay.

MR. RAGLAND: That is correct.

MR. COOPER: Okay. Thank you.

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one quick follow-up.

FURTHER EXAMINATION

BY MS. HURST:

Q. You've talked about an output produced by complements.

Does that sometime involve the possibility that two inputs will create synergies that is more than the sum of their parts?

A. Sure.

Q. And so, for example, if you have input J and input A, and the resulting product is J plus A, plus synergies, then by combining the two inputs you've created more value --

MR. RAGLAND: Objection to form.

Q. (By Ms. Hurst) -- is that right?

A. Correct.

Q. Is it true that the use of non-infringing alternatives allows the infringer to retain the value of the synergies, under those circumstances?

MR. RAGLAND: Objection to form.

THE DEPONENT: That's a -- an interesting question.

The -- the fundamental problem is that if you have synergies, they're attributed to the jointness and, therefore, you can't parcel out the

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THE VIDEOGRAPHER: This concludes the testimony given by Dr. James Kearn. The three original discs will be retained by Veritext. We're off the record at 3:23 p.m.

(TIME NOTED: 3:23 p.m.)

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